

SUMMER NEWS LETTER

JUNE, 1960

## Bibliography For Travelers In The United States

### NATURAL HISTORY

This Travel Bibliography for this issue was prepared by Ruth Hopson who received references from Verne Rockcastle, Arthur Nelson, and Roland Ross and Richard Wason. She gives some sound advice on how to get the most from the list.

### ON THE ROAD

We were happy to hear from Richard Wason who gave us a clue to launching this issue of the NEWSLETTER which is devoted to travel. Dick writes in a fine vein.

"Why squander your vacation time and money by arriving "cold" at a natural area, then spending a day or days trying to get oriented when this could have been done earlier from literature. This can be obtained from Park Superintendents, Forest Supervisors and Monument directors by writing to them.

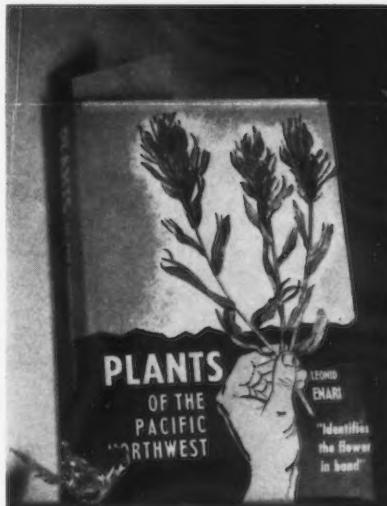
"Always check in at orientation centers or headquarters if available, for the latest information on how, when, and where to get the most enjoyment from that particular area.

At National Parks and other areas take full advantage of the interpretive program, always free, usually very interesting and authoritative. These are provided through nature walks, longer hikes and evening campfire programs.

"Be prepared for some negative aspects of the location such as inadequate water supply, low nighttime temperature, over-crowding and other features."

Dick strongly recommends for the summer traveler "The Campground Guide" from Campgrounds Unlimited, Blue Rapids, Kansas.

For those who would travel in Michigan, Wisconsin, and Minnesota we have recommendations from Ann Verne Fuller and Beth Schultz. They suggest visiting this glaciated area to see its many lakes, large and small, its intriguing marshes



and bogs, and its varied glacial deposits. Then there are the dunes along the Lake Michigan east shore, the rivers and forests of Northern Wisconsin, and for the real searcher of beginnings, there is the origin of the Mississippi River at Lake Itasca near Bemidji, Minnesota. For the hardy who would take a canoe into real lake country there is the famous Quetico-Superior Wilderness area on the Minnesota Ontario border.

For the naturalist who would wander into the glaciated areas around Ohio, Indiana and Illinois are the stripmine areas which are favorite fossil hunting grounds.

Some areas in Kentucky and Tennessee are the Blue Ridge Mountains, Great Smoky National Park, the Tennessee Valley, and Reelfoot Lake. In Oklahoma one may visit the Wichita Mountain National Wildlife Refuge for Buffalo and Elk and the Lake Texoma Biological Station. In Kansas are many attractions such as the Cheyenne Bottoms Waterfowl Refuge, or the large bat population in gypsum caves of Comanche County.

The Utah Nature Study Society invites travelers to view the Great Salt Lake now at a low stage with about twenty six

percent salt. To the bird watchers there is offered the world famous Bear River Bird Refuge. Conservationists who would want to see the work of recovering a mountain side by terracing should visit the Davis Watershed north of Salt Lake City. The largest man-made hole in the world is about twenty miles southwest of Salt Lake City at the Bingham Copper mine. Any of the usual federal and state services in Utah and other states will be happy to supply brochures on many of the local attractions.

This bibliography is designed to help you choose a few books for traveling companions as you journey into new territory and to help you investigate the natural history as you go along. The lists have been compiled from the favorites of naturalists in the various geographic sections of the United States. These books are best suited for field use by either amateur or professional naturalists. Many other excellent books are available. This list is not for a home library of natural history, but for one to carry along on a trip. Some of these books are technical. If possible, make your selection after examining them in a library or bookstore. Look in libraries and secondhand bookstores for those that are out of print.

### Books To Read Before You Go

... then carry along for reference. These will direct you to many places of special interest to the naturalist:

Carson, Rachel, *The Edge Of The Sea*. Boston: Houghton Mifflin Company 1955. \$3.95

Peterson, Roger Tory, *Wild America*. Boston: Houghton Mifflin 1955. \$5.00

Teale, Edwin Way, *Autumn Across America* 1956. \$5.75 and *North With The Spring* 1951. \$5.00. New York: Dodd, Mead & Company

Wells, George and Iris, *The Handbook Of Wilderness Travel*. Harper & Bros. \$4.00

### NATIONAL OR EAST OR WEST

**Geology:** Write to the United States Geological Survey, Washington, D. C. for list of geologic maps of areas you are visiting. Write to The Geological Society of America, 419 W. 117 Street, N. Y. 27, N. Y. for list of Guide Books for Field Trips.

## AMERICAN NATURE STUDY SOCIETY NEWS LETTER

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## BIBLIOGRAPHY

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Casanova, Richard, *An Illustrated Guide To Fossil Collecting*. Naturegraph, San Martin, California 1957. Paper \$1.50; Hard \$2.60

Fenneman, Nevin M., *Physiography Of Eastern United States 1938 and Physiography Of Western United States 1931*. New York: McGraw-Hill Company

Goldring, Winifred, *Handbook Of Paleontology For Beginners And Amateurs*, Part I, The Fossils, N. Y. S. Museum, Albany, N. Y. \$1.00

Hinds, Norman E. A., *Geomorphology — The Evolution Of The Landscape*. New York: Prentice Hall 1943

Lobeck, A. K., *Geomorphology—An Introduction To The Study Of Landscapes*. New York: McGraw-Hill 1939

Pearl, Richard M., *How To Know The Minerals And Rocks*. A Signet Key Book. \$5.50

Pough, Fredrick H., *A Field Guide To Rocks And Minerals*. Boston: Houghton Mifflin 1957. \$3.95

Zim, Herbert S. and Shaffer, Paul R., *Rocks And Minerals*. New York: Simon and Schuster. Limp bound \$1.00; cloth \$2.50

## Ecology

Carr, Wm. H., *The Desert Speaks*. Arizona Sonoran Desert Museum, Tucson, Arizona. 1956. \$6.00

Carr Wm. H., *Tunnel In The Desert*. Arizona Desert Museum, Tucson, Arizona. 1957. \$6.00

Dodge, Natt N., *Flowers Of The Southwest Deserts*. Southwest Monuments Association, Santa Fe, New Mexico. 1952. \$1.00

Dodge, Natt N., *Flowers Of The Southwest Mountains*. Southwest Monuments Association, Santa Fe, New Mexico. 1952. \$1.00

Watts, May Theilgaard, *Reading The Landscape*. New York: The Macmillan Company 1957. \$4.75

## Plants

Cobb, Boughton, *Field Guide To The Ferns*. Boston: Houghton Mifflin 1956. \$3.75

Conard, Henry S., *How To Know The Mosses And Liverworts*. Wm. C. Brown Company 1956

Eifert & Metcalfe, *Native Ferns*. Audubon Society of Canada, 181 Jarvis Street, Toronto 2, Canada 1957. \$1.25

Eifert, Virginia S., *Exploring For Mushrooms*. Illinois State Museum, Springfield, Illinois

Engler, Frank E., *A Cartographic Guide To Selected Regional Vegetation Literature*. Sarracenia, No. 1, Pages 1-50; August, 1959

Graves, Arthur H., *Illustrated Guide To Trees And Shrubs*. Harper 1956. \$6.00

Muenscher, Walter Conrad, *Aquatic Plants Of The United States*. Ithaca, New York: Comstock Publishing Company 1944

Muenscher, Walter Conrad, *Weeds*. New York: The Macmillan Company 1943

Petrides, George A., *A Field Guide To Trees And Shrubs (East of the Rockies)*. Boston: Houghton Mifflin 1958

Platt, Rutherford, *American Trees*. New York: Dodd, Mead & Company 1952; and *A Pocket Guide To The Trees*. New York: Pocket Books, Inc. (Same text as American Trees).

Smith, Alexander H., *The Mushroom Hunter's Field Guide*. Ann Arbor: The University of Michigan Press 1958

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## Animals

Burt, W. H. and Grossenheimer, R. P., *A Field Guide To The Mammals*. Boston: Houghton Mifflin 1952. \$3.95

Cruickshank, Allan D., *Pocket Guide To The Birds, Eastern and Central America*. New York: Dodd, Mead & Company 1953. \$2.95

Jaques, H. E., *How To Know The Insects*, Revised Edition. Dubuque, Iowa: Wm. C. Brown Company

Murie, Olaus, *A Field Guide To Animal Tracks*. Boston: Houghton Mifflin 1954. \$3.75

Palmer, E. Laurence, *Palmer's Fieldbook Of Mammals*. New York: E. P. Dutton & Company 1957. \$3.75

Palmer, Ralph S., *The Mammal Guide*. Garden City, N. Y.: Doubleday & Company 1954. \$4.95

Peterson, Roger Tory, *A Field Guide To The Birds (East of the Rockies) and A Field Guide To Western Birds*. Boston: Houghton Mifflin 1941. \$3.95

Pettingill, Olin Sewall Jr., *A Guide To Bird Finding East Of The Mississippi* 1951; and *A Guide To Bird Finding West Of The Mississippi* 1953. New York: Oxford University Press.

Pope, Clifford, *Poisonous Snakes Of The New World*. N. Y. Zoological Society, N. Y. 60, N. Y. \$5.00

Pough, Richard H., *Audubon Bird Guide and Audubon Water Bird Guide* and *Audubon Western Bird Guide*. Garden City, N. Y.: Doubleday and Company

Stebbins, R. C., *Amphibians And Reptiles Of Western North America*. N. Y.: McGraw-Hill 1954

Zim, Herbert S., *Reptiles And Amphibians*. The Golden Guides

## Nature Study or Natural History

Palmer, E. Laurence, *Fieldbook Of Natural History*. New York: McGraw-Hill 1949

## PACIFIC NORTHWEST AND NORTHERN ROCKIES AND CALIFORNIA

## Guidebooks

Write to the National Parks, State Highway Departments, State Conservation Departments, and State Libraries for lists of others.

Grater, Russel K., *Grater's Guide To Mount Rainier National Park*. Portland, Oregon: Binfords and Mort 1949

Ruhle, George C., *Along Crater Lake Highways*. Crater Lake National Park, Oregon: Crater Lake Natural History Association. 1953

Ruhle, George C., *Guide To Glacier National Park*. Minneapolis 2, Minn. Campbell-Mithun, Inc.

Sunset Magazine, *Discovery Trips In Oregon and Discovery Trips In Washington*. Menlo Park, Cal.: Lane Book Company

Zim, Herbert S. and Dodge, Natt N., *The Pacific Northwest, A Guide to the Evergreen Playground*. New York: Golden Press

## Geology

Write to the state department of geology for lists of their publications. California: Division of Mines, Ferry Building, San Francisco 11, California. Oregon: Department of Geology and Mineral Industries, State Office Building, Portland 1, Oregon. Washington: Division of Mines and Geology, Olympia, Washington. Geology Departments of various colleges have publications and unpublished thesis. Geologic maps are available for some sections in addition

# Nature Study TIPS

A Service of the American Nature Study Society

NEWS LETTER INSERT

JUNE, 1960

## Discovering the Plant World

by CHARLES E. ROTH



Witch-hazel's leaf mosaic affords ample sunlight for each green factory.

Curious students peered into the opening at the base of the huge old maple. A flashlight beam showed it was hollow, at least up to the first branches. Only a thin shell supported the limbs with their unfolding leaves.

"But how can the tree be all rotted out and still be alive," several asked.

The teacher glowed inwardly. Here was a perfect situation for explaining the nature and function of cambium, bark and other essentials of tree anatomy.

### Curiosity and Learning

As primary energy converters, plants are the sustainers of animal life. Academically we know this and wish to transmit it to our students, yet by using a static, classical approach, we too often fail. But by beginning with dynamic experiences with plants, we find students asking leading questions that involve botanical basics. We are then in the exciting position of answering questions and stimulating investigations arising out of student curiosity. No longer do we merely impose information upon them.

### Woodland Discoveries

Standing under various trees and looking skyward through the leaf mosaic, we notice that different species have different patterns of leaf arrangement. Each pattern enables enough sunlight to filter down so that most leaves get the light they need to carry on their food making activities.

Size differences are also evident between leaves at the top of the tree and those at the bottom. Why is this so? Seldom do these experiences fail to incite questions about the function of leaves, thus providing a real springboard for discussion and investigation into the nature of photosynthesis.

Those large shelf fungi on a decaying stump merit exploration. Eager hands pull away the bark, revealing a network of fine white "threads." What are they? What is the relation of these mycelia to the more obvious parts of the plant? The plant is not green; how does it get its food? Questions fly.

The teacher skillfully explains how growing trees remove chemicals from the soil and lock them up in wood. When they die, fungi are among the organisms that release the trapped chemicals for reuse by other living things.

### An Epic Struggle

A study of lichens can be the opening chapter in the story of succession. Their presence facilitates chemical weathering, thus beginning the conversion of sterile rock into fertile soil. In time, plants with greater nutritional requirements will be able to live where lichens have pioneered.

This tale of life form replacing life form can be further enriched by studying seed dispersal. Imaginative minds quickly see seeds as mechanisms for invasion. By recording the kinds of seeds noted and the habitat where the parent plants were growing, students discover that plants of the early stages tend to have more mobile seeds than those of the climactic stages. Soil studies will show how the plants of a preceding stage have enriched the soil,

making possible successful invasion by species more ecologically "refined."

### Field Discoveries

Fields offer experiences similar to those of woodlands. Here also are patterns of leaf arrangement, but often the purpose may be somewhat different. Vertical leaves catch low intensity morning and afternoon light but minimize the intense, parching noonday sun. Dead vegetation is converted to richer soil partly by the action of close relatives of the shelf fungi — the mushrooms.

In many fields plant growth is lush, putting space at a minimum and water at a premium. Investigate different kinds of root systems and see how their stratification in the soil reduces the problem. Be sure to examine legumes which harbor nitrogen-fixing bacteria in gall-like nodules on their roots. How evenly are those nodules distributed among the plants in a field?

### Results

After such experiences, students because of their own questioning become aware of and sympathetic to the vital role of plants. Much they will have discovered themselves in the field; these first-hand experiences will stimulate laboratory and library research and class discussion that will amplify and stabilize their concepts. Many will begin to search for new facts about the fascinating plant world. Some will find hobbies with plants.

Like all good teaching, field experiences require careful planning using preselected areas. One must guide students to things which will generate curiosity and questions. The trick is not to let the trip appear too well planned, else the students loose their spontaneity. This is a skill you will develop with experience.

Happily, experiences of the sorts I've mentioned can be provided almost as easily in city parks and vacant lots as in rural woodlands and fields. Take your students out often — you will be glad you did.

# The Plant World: Teacher - Student Activities

## Plants As Animal Homes

Children are more often interested in animals than in plants. Utilize this fact to stimulate greater curiosity about plants by making a collection of different kinds of vegetation used in animal homes.

Dead trees become cafeterias and apartment houses for many creatures. Although many kinds of insects have preceded them, the woodpecker clan is usually responsible for constructing the first large homes. When these birds vacate, squirrels, mice, owls, wood ducks or various songbirds may take up residence. What kinds of trees in your neighborhood are most often used to make these apartment houses? Which are seldom used?

Birds' nests are usually made of plant materials. Examine some to find out what plants were used. Scout the area to find the source of these materials. This can easily be made into an instructional scavenger hunt. To identify the nests, consult Richard Headstrom's *Whose Nest is That?* available for 30 cents from the Massachusetts Audubon Society, 155 Newbury Street, Boston. Do not neglect the height at which the nests are found. This provides a fine chance to develop the concept of the layeration of a forest with certain birds preferring the herbaceous layer, some the understory and others the canopy layer. Do various birds prefer some species more than others? If so, what are the trees or shrubs they prefer? To identify these, use *A Field Guide to Trees and Shrubs* by George Petrides.

There is a great variety of gall-making insects which create homes in plants. The galls are so characteristic they can be used to identify the host plant. For more facts on the natural history and identification of galls see *Plant Galls and Gall Makers* by E. P. Felt. Leaf rollers and leaf miners also make conspicuous homes on or in plants and their study will lead to other facts about the plant world.

## Plants As Historians and Geographers

Most persons are familiar with the fact that you can tell the age of a tree by counting its rings. Some do this out of curiosity, but few go on to read the rest of the interesting story found there. Those who do discover that the weather

and the ecology of the tree are also recorded. In general, wide rings indicate abundant rainfall and plentiful sunshine while drought and/or crowding are the message of narrow rings. Often a ring will have a wide area and a narrow one, indicating crowding or shading on the narrow side. For more details on deciphering the code of tree rings see "Trees as History Books" *Audubon Bulletin No. 6*, Series 21, by Charles Mohr.

In areas where beavers are active or where there has been other cutting of hardwoods, look for stump sprouts. Cut through the largest on any given stump and count the rings. You will then know that tree was cut at least that long ago. For a more realistic date add one year — the time it would normally take for the sprout to get started.

Many of our common plants are not native Americans. Collect some common weeds and as you identify them look in botany books such as Gray's *Manual of Botany* to find their native country. Plot them on a world map. Can you trace some of the patterns of human immigration from this? Where do you find most of these introduced plants — fields, woods, marshes, roadways? How many of these are edible? Many first generation immigrants can tell you interesting ways to prepare them. Otherwise, consult Fernald, Kinsey and Rollins, *Edible Wild Plants of North America*.

## Plants and Man

Children often ask of any object "What good is it?" and "How much is it worth?" While we deplore this attitude and wish to develop a more aesthetic approach, we are being more realistic if we utilize the economic viewpoint to arouse a beginning interest.

Most boys could not care less about the beauty of a white ash with its straight trunk and fine, compound leaves, but their ears prick up and their minds come to attention when you mention that white ash is one of the best woods for baseball bats. For more of this sort of tree lore you will find William Harlow's *Trees of Eastern and Central North America* most helpful.

Using this basic concept, have students make a collection of tree leaves and/or sections of the saplings and mount them

on an electrical nature quiz board. (For details see "Nature Quiz Boards," *Audubon Bulletin No. 3*, Series 26, by Dorothy Treat.) Match these trees with pictures or models of objects for which the wood is used. Much will be learned by making and enjoying such a game. When interest in using the board wanes, donate it to the children's ward of your local hospital.

Boys taking manual training may wish to make their game from woods most commonly used in the shop. Since many of the trees grow only in the South and West, there is a good chance for the English teacher to join in and help to find a pen pal who will collect the necessary plant specimens.

Girls taking home economics may wish to do a similar project with native dye plants by matching the plant or its picture with swatches of cloth dyed from its juices. For a listing of such native plants and their dyes refer to Allan H. Eaton's *Handicrafts of the Southern Highlands*.

## Some Good Books

There are many good books on this subject. A few that I have found to be pleasant reading as well as informative are *Reading the Landscape* by May T. Watts (Macmillan), *Our Green World* by Rutherford Platt (Dodd-Mead), and *The Living Forest* by Jack McCormick (Harper).



The simplest objects, such as the pine cones in this class is studying, can be jumping-off points for discoveries in the plant world.

For further information about this subject or about the society, write to the Editor of *Nature Study Tips*: Prof. Richard B. Fischer, Nature Study Division, Rural Education Department, Stone Hall, Cornell University.

to those published by the state departments of geology, the United States Geological Survey and a series called **Oil And Gas Investigations Preliminary Maps**. These are available from the U.S.G.S. at Denver. Be sure to order them FLAT.

**Baldwin, Ewart M., Geology Of Oregon.** Eugene, Ore.: U. of Oregon Cooperative Book Store 1959

**Brown, Vinson and Allan, David, Rocks And Minerals Of California.** San Martin, Cal.: Naturegraph Co. 1957. Paper \$2.75; Buckram \$4.50

**Campbell, Charles D., Introduction To Washington Geology And Resources.** Information Circular 22. Pullman, Wash.: State College of Washington 1953

**Danner, Wilbert R., Geology Of Olympic National Park.** Seattle: University of Washington Press 1952

**Hinds, Norman, Evolution Of The California Landscape.** San Francisco: State Division of Mines 1952

**Stagner, Howard R., Behind The Scenery Of Mount Rainier National Park.** Longmire, Wash.: Mount Rainier Natural History Association 1952

**Steere, Margaret L., Fossil Localities Of The Salem-Dallas Area and Fossil Localities Of The Sunset Highway and Fossil Localities Of The Eugene Area and Geology Of The John Day Area.** Ore-Bin, State Department of Geology and Mineral Industries, State Office Building, Portland 1, Oregon. (These are available free upon request.)

**Wilkinson, W. D., Field Guidebook — Geologic Trips Along Oregon Highways.** Bulletin 50. State of Oregon Department of Geology and Mineral Industries. \$1.50

**Williams, Howel, Crater Lake, The Story Of Its Origin.** Berkeley: University of California Press 1941

#### NATURAL HISTORY — PLANTS and ANIMALS

**Berry, William D. and Elizabeth, Mammals Of The San Francisco Bay Region.** Berkeley: University of California Press 1959. \$1.50

**Brown, Vinson, The California Wildlife Region, Its Common Animals And Plants.** San Martin, Cal.: Naturegraph 1957. Paper \$2.00; Library \$3.00

**Brown, Vinson, The Sierra Nevadan Wildlife Region, Its Common Animals And Plants.** San Martin, Cal.: Naturegraph 1954. Paper \$1.00; Cloth \$1.75

**Davis, Ray J., Flora Of Idaho.** Dubuque, Iowa: Wm. C. Brown Co. 1952

**Eliot, Willard Ayres, Forest Trees Of The Pacific Coast.** N. Y.: G. P. Putnam's Sons 1938

**Enari, Leonid, Plants Of The Pacific Northwest.** Portland, Ore.: Binfords and Mort. 1956. \$3.00

**Fagerlund, Gunnar O., Olympic National Park, Washington.** Natural History Handbook Series No. 1. Washington, D. C.: Superintendent of Documents 1954. \$30.

**Guberlet, Muriel Lewin, Seaweeds At Ebb Tide.** Seattle: University of Washington Press 1956. \$3.50

**Gunther, Erna, Ethnobotany Of Western Washington.** Seattle: University of Washington Press 1945. \$1.50

**Haskin, L. L., Wild Flowers Of The Pacific Coast.** Portland, Ore.: Metropolitan Press 1934

**Hill, Clara Chapman, Spring Flowers Of The Lower Columbia Valley.** Seattle: University of Washington Press 1958. \$3.00

**Ingles, Lloyd G., Mammals Of California And Its Coastal Waters.** Stanford: Stanford University Press 1954

**Jaeger, Edmund C., Desert Wildflowers 1956 and Our Desert Neighbors 1950.** Stanford: Stanford University Press

**Keen, A. Myra and Pearson, John C., Illustrated Key To West North American Gastropod Genera.** Stanford, California: Stanford University Press

**Keen, A. Myra and Frizzell, Don L., Illustrated Key To West North American Pelecypod Genera.** Stanford, California: Stanford University Press

**Keen, F. P., Insect Enemies Of Western Forests.** United States Department of Agriculture Miscellaneous Publication No. 273, Revised 1952. Washington 25, D.C.: Superintendent of Documents. \$1.00 Paper per cover.

**Lyons, C. P., Trees, Shrubs And Flowers To Know In Washington.** Toronto, Vancouver: J. M. Dent & Sons (Canada) 1956

**McMinn, H. E. and E. Maino, An Illustrated Manual Of Pacific Coast Trees.** Berkeley: University of California Press

**Metcalf, Woodbridge, Native Trees Of The San Francisco Bay Region.** Berkeley: University of California Press 1959. \$1.50

**Morris, Percy A., A Field Guide To Shells Of The Pacific Coast And Hawaii.** Boston: Houghton Mifflin 1952. \$3.95

**Mosher, Milton M. and Lunnum, Kurt, Trees Of Washington.** Extension Bulletin No. 440. Pullman: State College of Washington 1956

**Munz, Philip A., A California Flora.** Berkeley: University of California Press 1959. \$11.50

**Peattie, Roderich, The Pacific Coast Ranges and The Sierra Nevada.** New York: Vanguard Press 1946

**Peck, Morton E., A Manual Of The Higher Plants Of Oregon.** Portland, Oregon: Binford's Mort 1941. (out of print)

**Preston, Richard J., Rocky Mountain Trees.** Ames, Iowa: The Iowa State College Press 1947

**Randall, Warren R., Manual Of Oregon Trees And Shrubs.** Corvallis, Oregon: O. S. C. Cooperative Association 1958

**Ricketts, Edward F. and Calvin, Jack, Between Pacific Tides.** Stanford: Stanford University Press 1952

**Ross, Charles R., Trees To Know In Oregon.** Extension Bulletin No. 697, Revised 1957. F. C. Extension Service, Corvallis, Oregon

**Smith, Arthur C., Introduction To The Natural History Of The San Francisco Bay Region.** Berkeley: University of California Press 1959. \$1.50

**Stebbins, Robert C., Reptiles And Amphibians Of The San Francisco Bay Region.** Berkeley: University of California Press 1959. \$1.50

**Summer, Lowell and Dixon, Joseph, Birds And Mammals Of The Sierra Nevada.** Berkeley: University of California Press 1953

**Yocom, Charles and Dasmann, Ray, The Pacific Coastal Wildlife Region.** San Martin, California: Naturegraph Co. 1957. Paper \$2.00

#### CENTRAL UNITED STATES

##### Natural History — Plants and Animals

**Billington, Cecil, The Shrubs Of Michigan \$4.50 and Ferns Of Michigan \$5.00.** Bloomfield Hills, Mich.: Cranbrook Institute of Science.

**Bingham, Marjorie T., The Orchids Of Michigan.** Bloomfield Hills, Mich.: Cranbrook Institute of Science. \$1.00

**Dickinson, W. E., Lizards And Snakes Of Wisconsin.** Milwaukee Public Museum. \$.75

**Melhus, I. E., Native Ferns Of Iowa.** Ames, Iowa: Iowa State College Extension Service

**Morrison, Kenneth D. and Herz, Josephine, Where To Find Birds In Minnesota.** Saint Paul: Itasca Press, Webb Publishing Co. 1950

**Otis, Charles Herbert, Michigan Trees.** Ann Arbor: University of Michigan Press 1931

**Prescott, G. W., Algae Of The Western Great Lakes Area.** Bloomfield Hills, Mich.: Cranbrook Institute of Science. \$10.50

**Smith, Alexander H., Michigan Mushrooms.** Bloomfield Hills: Cranbrook Institute of Science

**Smith, Helen V., Michigan Wild Flowers.** Bloomfield Hills: Cranbrook Institute of Science

**Spencer, Haven H., Ed., Enjoying Birds In Michigan.** Michigan Audubon Society 1960. (Send \$1.25 to Monica A. Evans, Kalamazoo College, Kalamazoo, Mich.)

**Steere, W. C., The Liverworts Of Southern Michigan.** Bloomfield Hills: Cranbrook Institute of Science. \$1.00

"Now is a good time to prepare for this educational venture; for whatever the current topic in the biology text may be, it must have its correlations with man's relationships to his school grounds. And to study these relationships outdoors occasionally adds verve to the classroom work, heightening student interest and desire to learn." *John W. Brainerd, Professor of Biology, Springfield College, Springfield, Mass., has written a very interesting article on this subject which was printed in the October, 1958 issue of THE AMERICAN BIOLOGY TEACHER. It is entitled OUTDOOR LABORATORY SERIES — Number 1, "Preparing for a Land-Use Survey of School Grounds by a Biology Class."*

Steyermark, Julian A., *Spring Flora Of Missouri*. St. Louis: Missouri Botanical Garden 1940

**Weeds Of The North Central States.** University of Illinois Agricultural Experiment Station, Circular 718

**Plants Of Iowa.** Grinnell, Iowa: Grinnell College 1936

#### EASTERN UNITED STATES

Ammons, Nellie, *Shrubs Of West Virginia*. West Virginia University Bulletin. Morgantown, West Virginia

Bishop, S. C., *The Salamanders Of New York*. N. Y. S. Museum, Albany, New York

Branham, Mrs. Hugh, *Shells Along The Florida Shore*. St. Petersburg: Florida Speaks, Inc. \$1.00

Conant, Roger, *Reptiles And Amphibians Of The Northeastern States*. Zoological Society of Philadelphia, 34th & Girard Ave. 1952. \$1.50

Gleason, Henry A., *The New Britton And Brown Illustrated Flora Of The Northeastern United States And Adjacent Canada*. New York: N. Y. Botanical Garden 1952

Kieran, John, *A Natural History Of New York City*. Boston: Houghton Mifflin 1959. \$5.95

Morris, Percy A., *Field Guide To The Shells Of Our Atlantic And Gulf Coasts*. Boston: Houghton Mifflin. \$3.95

Pope, Clifford, *Snakes Of The Northeastern United States*. N. Y. Zoological Society, N. Y. 60, N. Y. \$50

Thompson, Betty Flanders, *The Changing Face Of New England*. Macmillan 1958

Vilas, C. N. and N. R., *Florida Marine Shells*. Chicago: Aberdeen Press 1945

Zim, Herbert S., *The American Southeast*. N. Y. Golden Press. Limp Bound \$1.00; Cloth \$2.50

#### WELL KNOWN NATURES SERIES

**Golden Guides**, Golden Press, New York

**Mentor Books** (some nature books), 245 Fifth Ave., N. Y. 16, N. Y.

**Nature Series**, G. P. Putnam's Sons, New York

**Pocket Books, Inc.** (some nature books), New York

**The Peterson Field Guide Series**, Boston: Houghton Mifflin

**The Picture-Key Nature Series**, edited by H. E. Jaques. Wm. C. Brown, Dubuque, Iowa

#### A LOOK AHEAD

Undoubtedly there are numerous books, pamphlets, keys and other materials some readers might feel should have been included in the listing for travelers. Time for a more thorough preparation was hardly available. However, we would welcome receiving names to include in some future listings which it might be possible to include in a pamphlet the ANSS could logically develop. Let us hear from you.

#### WESTERN SECTION OF ANSS MEETS IN OREGON

Dr. Elmo N. Stevenson, president elect of the western Section of the ANSS has prepared a fine program for the annual June meeting held in connection with the Pacific Division of the AAAS. The meeting will be held in Eugene, Oregon at the University of Oregon on June 12-13.

An excellent field trip to the Three Sisters Area on June 12 with demonstrations of Workshop Techniques has been planned by Ruth Hopson, national president of ANSS. On June 13 there will be a program of papers and a panel discussion on "Bringing the Schools to Nature Study." The annual Kodachrome showing will be held in the evening. In addition there will be a film shown by the Oregon Fish and Game Department.

#### NATURE STUDY TIPS AVAILABLE

Copies of Nature Study Tips are available for promotion of membership. State Chairmen are urged to write to Beth Schultz for copies to distribute to prospects. Beth also has available for members copies of the ANSS directory for \$1.00. Write to Dr. Beth Schultz, Western Michigan University, Kalamazoo, Michigan.

Your editor would appreciate a reaction from the membership regarding this issue of the NEWSLETTER and of the Nature Study Tips.

#### Travel Notes

If you want a vacation on horseback in the mountains, join Don's trail rides in the west. Get information from Don Clausner, P. O. Box 1229, Santa Fe, N. Mexico.

\* \* \*

Richard and Florence Weaver are getting ready for some real travel which takes them on a year's leave to Pakistan where they will be involved in developing a conservation program. They will stop at Warsaw, Poland for the meetings of the International Union for Conservation.

\* \* \*

Jack and Enid Dolstad of Vashon, Washington, supervise about thirty teenage boys in a Student Conservation Education Program sponsored by the National Parks Association and supported by private contributions. Any ANSS members traveling in that area are invited to visit and possibly to lend a hand by giving a short talk on a conservation or nature theme.

\* \* \*

Don't forget to schedule attendance at the New York meeting of ANSS in December. Mark it on your calendar now.

\* \* \*

Best wishes to the Baldwins on their round the world trip starting this June.

#### Application for Annual Membership

Membership in the American Nature Study Society includes a membership card, a quarterly NEWSLETTER and the magazines you select. Please note you can get your membership for less than \$3.00, even free, by selecting the proper group.

**Group Cost Publications Received** (All include ANSS Newsletter and Nature Study Tips)

1.	\$3.00	Membership only
2.	4.00	Membership with Cornell Science Leaflet (4 issues)
3.	5.50	Membership with Canadian Audubon Magazine (5 issues)
4.	6.50	Membership with Cornell Science Leaflet and Canadian Audubon
5.	7.00	Membership with Natural History
6.	8.00	Membership with Cornell Science Leaflet and Natural History
7.	9.50	Membership with Canadian Audubon and Natural History
8.	10.00	Membership with Canadian Nature, Natural History, Cornell Science Leaflet
F.		For Family Membership, add \$1.50 to the cost of group selected. Circle group desired, send application with name and address and check to:

Mrs. Mildred Rulison, Treasurer  
754 Greenview Place  
Lake Forest, Illinois

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